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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,912	02/16/2001	Steven J. Mastrianni	YOR920000799US1 (14100)	4432

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EXAMINER	
LE, BRIAN Q	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 01/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/784,912	MASTRIANNI ET AL.	
	Examiner	Art Unit	
	Brian Q Le	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-14, 17-20, and 22-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mahoney et al. U.S. Patent No. 6,519,607 and Adan U.S. Patent No. 6,373,047.

Regarding claim 1, Mahoney teaches a method for automatically launch an application (execute associated command) (abstract) in a computing device by authenticating a user (controlling image resource) (column 2, lines 28-30 and column 4, lines 55-62) via a digital camera associated with said computing device (column 2, lines 31-32), said method comprising:

(a) obtaining a digital representation of said user via said digital cameral (column 2, lines 30-35).

(c) comparing said resulting digital image to a pre-stored digital image of said user (FIG. 2, elements 26 and 28);

(d) retrieving user information including an application to be launched in response to a successful comparison result, said user information being associated with said pre-stored digital image of said user (FIG. 2, element 30 and FIG. 3); and

(e) launching said application (column 3, lines 21-22).

However, Mahoney does not indicate the concept of filtering (extracting) digital representation with a digital edge detection algorithm. Adan teaches a method of launching an

application by comparing images (FIG. 10 A and FIG. 12A) and also filtering (extracting) digital representation with a digital edge detection algorithm (column 8, lines 40-49 and column 9, lines 35-37). Modifying Mahoney's method of launching an application by authenticating user by digital image associated with computing device according to Adan would able to further identify the pattern of the image for more accurate matching. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Mahoney according to Adan.

For claim 2, Mahoney teaches the method further comprising a step of aligning said user in relation to said computing device for obtaining a digital representation of said user (column 2, lines 55-60).

Referring to claim 3, Mahoney also teaches the method further comprising a step of centering (positioning) said resulting image with respect to a frame provided in said computing device (column 2, lines 55-60).

Regarding claim 4, Mahoney teaches the comparing step as discuss in claim 1. However, Mahoney does not teach the comparing step further comprising a step of sliding vertical and horizontal edges of said resulting image for the comparison. Adan teaches the comparing step wherein the sliding vertical and horizontal edge (scans across the image) of said resulting images was utilized (column 15, lines 32-39). Modifying Mahoney's method of launching an application by authenticating user by digital image associated with computing device according to Adan would able to fully compare the resulting image over pre-stored image. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Mahoney according to Adan. Furthermore, it would have been obvious for one

skilled in the art to slide the resulting image vertical and horizontal to be able to match with the pre-stored image.

For claim 5, Mahoney inherently indicates the resulting image and pre-stored image for said user are binary matrices (column 1, lines 18-42). Plus, it is well known for one skilled in the art that all computer data (including image data) are present in binary format (binary matrix).

Regarding claim 6, as disclosed in claim 1, Adan further teaches the method wherein said comparing step utilizes an approximation filter to improve comparing of the resulting image with the pre-stored image (column 4, lines 1-10). (It is obvious for one skill in the art to use a filter to extract cumulative changes to capture the image pattern).

Referring to claim 7, Mahoney teaches the method wherein said pre-stored digital image of said user is stored in a database on said computing device (FIG. 1, element 16).

Regarding claim 8, Mahoney teaches the method of send images between computing resources (computers) by an image/data processing software. Thus, it is obvious that one skilled in the art would use the data processing application as an email client to process claimed limitations in claimed 1. In addition, the Applicant indicates (bottom of page 4 in the specification) that e-mail client is the existing concept prior to this claimed concept was formed. Therefore, it would have been obvious for Mahoney to use e-mail client as the data processing software to send image/process image between computing resources.

Regarding claim 9, as discussed in claim 8, Mahoney further teaches a login process (column 4, lines 40-60), which obviously utilizes user information including username and password associated with said user. Plus, Adan also teaches this concept (FIG. 12B, element 236).

Regarding claim 10, please refer back to claim 8 for the discussion. Also, it is obvious that an email application would able to receive one or more email messages. In addition, Mahoney teaches the display concept (column 2, lines 30-35).

For claim 11, Mahoney teaches the method further comprising a step of sensing said user in proximity to said computing device for obtaining said digital representation of said user (column 2, lines 30-60).

Referring to claim 12, Mahoney teaches the method wherein said user interacts via an interface with a computing device for obtaining said digital representation of said user (column 2, lines 30-60).

Also to claim 13, as discussed in claim 1, Adan further teaches pre-stored digital image for said user is obtained from a pre-existing digital representation of said user filtered by an edge detection algorithm (column 9, lines 14-26).

For claim 14, as discussed in claim 1, Adan discloses the method wherein said edge detection algorithm is a one bit per pixel edge detection algorithm (column 9, lines 1-13).

Regarding claim 17, please refer back to claim 10 for the explanation. In addition, a monitor display that shows the process of the software which verifies the log in process would display the user's name.

Regarding claim 18, Mahoney further teaches the prompting said user to enter user information (login concept) and launching the application in response to a successful match if the there is no match found (no match found due to high threshold setting in matching) (column 4, lines 52-62).

Regarding claim 19, Mahoney teaches the concept of updating the pre-stored digital image (column 4, lines 40-51) of said user by merging said pre-stored digital image with said resulting digital image to generate a composite image (updated or resulted image generated by the rules of associations between the previously stored and the updating images).

For claim 20, Mahoney further teaches the updated/composite image is generated by taking an arithmetical mean (command associations) of said pre-stored digital image and said resulting digital image (page 4, lines 40-51).

For claim 22, Mahoney further teaches the method further comprising a step of prompting said user to confirm user information associated with said pre-stored digital image in response to said successful match of said user (column 16, lines 1-13).

For claim 23, please refer back to claim 1 for the explanation.

Referring to claim 24, Mahoney discloses the system wherein said computing device is connected to a communication network (the communication between the image computing resource and the database is a communication network) (column 2, lines 43-48).

Regarding claim 25, Mahoney teaches the system wherein said computing device is incorporated into a household appliance (column 1, lines 12-20).

For claims 26-34, please refer back to claims 8, 2, 3, 9, 10, 11, 18, 19, and 1 respectively for the explanations.

3. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mahoney et al. U.S. Patent No. 6,519,607 and Adan U.S. Patent No. 6,373,047 as applied to claim 14 above, and further in view of the Applicant.

Regarding claims 15 and 16, Mahoney does not teach the concept wherein the detection algorithm is Sobel nor the filters are Laplacian and Gaussian filters. However, the Applicant indicates (on page 4 of the specification) that Sobel, Laplacian and Gaussian algorithms and filters are well known in the art of image edge detection and filtration. Therefore, it would have been obvious for one skill in the art to use Sobel, Laplacian and Gaussian algorithms to detect and filter edges or patterns within the image.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mahoney et al. U.S. Patent No. 6,519,607 and Adan U.S. Patent No. 6,373,047 as applied to claim 19 above, and further in view of McLaren U.S. Patent No. 6,546,123.

Regarding claim 21, Mahoney does not teach the concept of using a least squares algorithm for improving definition of edges of the image. However, McLaren teaches the concept of image edge detection using a least squares algorithm (FIG. 13 A, elements 228, 240; FIG. 14, element 270 and FIG. 16, element 282). Modifying Mahoney's method of launching an application by authenticating user by digital image associated with computing device according to McLaren would able to further improves the definition of edges of the image. This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Mahoney according to McLaren.

CONCLUSION

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to image comparison and authentication, edge detection and filtration, and application execution base on comparison:

U.S. Pat. No. 6,320,973 to Suzaki, teaches Animal identification system based on irial granule analysis.

U.S. Pat. No. 6,295,391 to Rudd, teaches automatic data routing via voice command annotation.

U.S. Pat. No. 6,157,435 to Slater, teaches image content identification, authentication and execution.

U.S. Pat. No. 6,301,388 to Hiramoto, teaches image matching apparatus.

U.S. Pat. No. 6,658,145 to Silver, teaches fast high-accuracy multidimensional pattern inspection.

U.S. Pat. No. 5,771,354 to Crawford, teaches internet online backup system provides remote storage for customers using ids and passwords which were interactively established when signing up for back up services.

U.S. Pat. No. 6,275,601 to Yamaguchi, teaches fingerprinting judging method.

U.S. Pat. No. 6,226,406 to Hsieh, teaches method and apparatus for hybrid sampling image verification

U.S. Pat. No. 6,111,950 to Fredlund, teaches method, apparatus and medium for delivering a processing application linked to data to be processed.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q Le whose telephone number is 703-305-5083. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC Customer Service whose telephone number is 703-306-0377.

BL
January 21, 2004

SAMIR AHMED
PRIMARY EXAMINER